

Claims

1. A liquid aspirator, in particular for liquids containing solids such as sludge, comprising a receptacle (13) into which liquid can be sucked in by means of an aspirator motor (3, 4) through a vacuum connector (15) and from which the liquid can drain through a drainage (7), characterized in that the receptacle (13) has at least two separate receiving chambers (1, 2) and a control, by which alternately filling of one of the receiving chambers (1, 2) with liquid is realized while at the same time the other receiving chamber (2, 1) is drained.
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2. The liquid aspirator according to claim 1, characterized in that each receiving chamber (1, 2) has associated therewith an aspirator motor (3, 4) and the control alternately switches on and off the aspirator motors (3, 4).
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3. The liquid aspirator according to claim 1, characterized in that one aspirator motor (3), actuated by means of the control, is designed for alternating aspiration of liquid into several receiving chambers (1, 2).
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4. The liquid aspirator according to one of the preceding claims, characterized by a mechanical control.
5. The liquid aspirator according to one of the preceding claims, characterized in that the receiving chambers (1, 2) can be sealed relative to the vacuum side of the aspirator motor (3, 4) by main valves (19, 20).
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6. The liquid aspirator according to claim 5, characterized in that the main valves (19, 20) are coupled to one another such that they open and close alternately.
7. The liquid aspirator according to claim 6, characterized in that the main

valves (19, 20) are mechanically connected to one another.

8. The liquid aspirator according to one of the claims 5 to 7, characterized in that the main valves (19, 20) are coupled by a linkage.

9. The liquid aspirator according to claim 8, characterized in that the linkage pivots a switching flap (37) that connects the vacuum side of the aspirator motor (3) alternatingly to one of the receiving chambers (1, 2), respectively.

10. The liquid aspirator according to claim 9, characterized in that the switching flap (37) forms the main valves.

11. The liquid aspirator according to one of the preceding claims, characterized in that a float (9, 10) is secured in a guide (11, 12) in each receiving chamber (1, 2).

12. The liquid aspirator according to one of the claims 6 to 9 and claim 10, characterized in that the float (9, 10) is arranged such underneath the main valve (19, 20), respectively, that a rise of the liquid in the receiving chamber (1, 2) past a determined level forces the float (9, 10) against the main valve (19, 20) and closes it.

13. The liquid aspirator according to one of the claims 10 to 12, characterized in that the guide (11, 12) of the float (9, 10) has penetrations in the lower area and in the upper area (11', 12') is closed circumferentially and surrounds in the upper area sealingly the float (9, 10) when lifted.

14. The liquid aspirator according to one of the preceding claims, characterized in that the receiving chambers (1, 2) are sealingly connected by an auxiliary valve (23, 24), respectively, to the exhaust side of the aspirator motor (3, 4).

15. The liquid aspirator according to one of the claims 11 to 13 and claim 14, characterized in that the connection of the exhaust side of the aspirator motor (3, 4) to the receiving chambers (1, 2) is realized by the guides (11, 12) of the floats (9, 10).

5 16. The liquid aspirator according to claim 15, characterized in that a connecting channel (42) extends from the side of the auxiliary valve (23, 24) facing away from the exhaust side of the aspirator motor (3, 4) to the neighboring float (9, 10), respectively.

10 17. The liquid aspirator according to one of the claims 14 to 16, characterized in that main valve (19, 20) and auxiliary valve (23, 24) of each receiving chamber (1, 2) are coupled such that they open and close alternately.

18. The liquid aspirator according to one of the claims 7 to 17, characterized in that the coupling of the valves (19, 20, 23, 24) is mechanical.

15 19. The liquid aspirator according to claim 18, characterized in that the main valves (19, 20) are coupled by a rocker (21).

20. The liquid aspirator according to claim 18 or 19, characterized in that the auxiliary valves (23, 24) are coupled by a rocker (25).

20 21. The liquid aspirator according to claim 19 and 20, characterized in that the rockers (21, 25) of the main valves (19, 20) and of the auxiliary valves (23, 24) are rigidly connected to one another.

22. The liquid aspirator according to one of the preceding claims, characterized in that the receiving chambers (1, 2) have essentially cylindrical shape and/or essentially the same volumes and/or are arranged within one another.

23. The liquid aspirator according to one of the preceding claims, characterized in that the receiving chambers (1, 2) at the bottom side are closable by a common vacuum flap (56) that is supported pivotably in such a way between two stops (55, 66) that, resting against one of the stops (55, 56), it closes off one of the receiving chambers (1, 2) and opens the other receiving chamber (2, 1) toward the drainage (7).

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24. The liquid aspirator according to one of the preceding claims, characterized in that the receptacle (13) is pivotably supported.

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25. The liquid aspirator according to claim 24, characterized in that the receptacle (13) is supported so as to swing about a substantially horizontal axle (26).

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26. The liquid aspirator according to claim 24 or 25, characterized in that each receiving chamber (1, 2) of the receptacle (13) has an air aspiration opening (17, 18) that is alternately connected to the vacuum side of the aspirator motor (3) by pivoting the receptacle (13).

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27. The liquid aspirator according to claim 26, characterized in that the air aspiration openings (17, 18) are arranged in a wall area of the receptacle (13) which wall area is curved with a substantially constant radius about the pivot axis of the receptacle (13).

28. The liquid aspirator according to one of the claims 24 to 27, characterized in that the receptacle (13) is divided such into receiving chambers (1, 2) that with increasing filling of a receiving chamber (1, 2) with liquid the center of gravity will shift, causing the receptacle (13) to automatically pivot into a position that releases another receiving chamber (2,1) for filling.

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29. The liquid aspirator according to one of the preceding claims except claim

22, characterized in that the receptacle (13) in cross-section has substantially a circular shape that is divided by a partition (40) into two receiving chambers (1, 2) with substantially semi-circular cross-section.

30. The liquid aspirator according to claim 26 and claim 29, characterized in that the air aspiration openings (17, 18) are arranged adjacent one another on either side of the partition (40) and have closable drainage openings positioned opposite one another on either side of the partition (40).